

All Databases

PubMed

Nucleotide

Protein

Genome

Structure

OMIM

PMC

Journals

Books

Search

for

Go

Clear

Limits

Preview/Index

History

Clipboard

Details

Display

Show

Send to

All: 1



About Entrez

Text Version

Entrez PubMed

Overview

Help | FAQ

Tutorial

New/Noteworthy

E-Utilities

PubMed Services

Journals Database

MeSH Database

Single Citation Matcher

Batch Citation Matcher

Clinical Queries

LinkOut

My NCBI (Cubby)

Related Resources

Order Documents

NLM Catalog

NLM Gateway

TOXNET

Consumer Health

Clinical Alerts

ClinicalTrials.gov

PubMed Central

- If making selections (e.g., Subheadings, etc.), use the [Send to Search Box](#) feature to see PubMed records with those specifications.
- Select PubMed under the Links menu to retrieve all records for the MeSH Term.
- Select [NLM MeSH Browser](#) under the Links menu for additional information.

☐ 1: **Reactive Oxygen Species**

Links

Molecules or ions formed by the incomplete one-electron reduction of oxygen. These reactive oxygen intermediates include SINGLET OXYGEN; SUPEROXIDES; PEROXIDES; HYDROXYL RADICAL; and HYPOCHLOROUS ACID. They contribute to the microbicidal activity of PHAGOCYTES, regulation of signal transduction and gene expression, and the oxidative damage to NUCLEIC ACIDS; PROTEINS; and LIPIDS.

Year introduced: 1993

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules for allowable combinations.

- ☐ administration and dosage
- ☐ adverse effects
- ☐ agonists
- ☐ analysis
- ☐ antagonists and inhibitors
- ☐ blood
- ☐ cerebrospinal fluid
- ☐ chemical synthesis
- ☐ chemistry
- ☐ classification
- ☐ diagnostic use
- ☐ history
- ☐ immunology
- ☐ isolation and purification
- ☐ metabolism
- ☐ pharmacokinetics
- ☐ pharmacology
- ☐ physiology
- ☐ poisoning
- ☐ radiation effects
- ☐ therapeutic use
- ☐ toxicity
- ☐ urine

☐ Restrict Search to Major Topic headings only

☐ Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

Entry Terms:

- Pro-Oxidants
- Pro Oxidants
- Oxygen Radicals
- Active Oxygen
- Oxygen, Active
- Oxygen Species, Reactive

See Also:

- [Free Radicals](#)
- [Oxidative Stress](#)

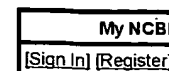
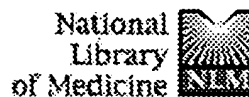
All MeSH CategoriesChemicals and Drugs CategoryInorganic ChemicalsOxygen Compounds**Reactive Oxygen Species**

Display

Show

Send to

[Write to the Help Desk](#)



All Databases

PubMed

Nucleotide

Protein

Genome

Structure

OMIM

PMC

Journals

Books

Search for [About Entrez](#)[Text Version](#)**Entrez PubMed**[Overview](#)
[Help | FAQ](#)
[Tutorial](#)
[New/Noteworthy](#)
[E-Utilities](#)**PubMed Services**[Journals Database](#)
[MeSH Database](#)
[Single Citation Matcher](#)
[Batch Citation Matcher](#)
[Clinical Queries](#)
[LinkOut](#)
[My NCBI \(Cubby\)](#)**Related Resources**[Order Documents](#)
[NLM Catalog](#)
[NLM Gateway](#)
[TOXNET](#)
[Consumer Health](#)
[Clinical Alerts](#)
[ClinicalTrials.gov](#)
[PubMed Central](#)

- If making selections (e.g., Subheadings, etc.), use the [Send to Search Box](#) feature to see PubMed records with those specifications.
- Select PubMed under the Links menu to retrieve all records for the MeSH Term.
- Select [NLM MeSH Browser](#) under the Links menu for additional information.

☐ **1: Singlet Oxygen**[Links](#)

An excited state of molecular oxygen generated photochemically or chemically. Singlet oxygen reacts with a variety of biological molecules such as NUCLEIC ACIDS, PROTEINS, and LIPIDS causing oxidative damages.

Year introduced: 2002

Subheadings: This list includes those paired at least once with this heading in MEDLINE and may not reflect current rules for allowable combinations.

- ☐ adverse effects ☐ analysis ☐ antagonists and inhibitors ☐ blood ☐ chemistry ☐ history ☐ metabolism
☐ pharmacology ☐ physiology ☐ radiation effects ☐ toxicity

☐ Restrict Search to Major Topic headings only

☐ Do Not Explode this term (i.e., do not include MeSH terms found below this term in the MeSH tree).

Registry Number: 17778-80-2

Entry Terms:

- Oxygen, Singlet
- Singlet Dioxygen
- Dioxygen, Singlet

Previous Indexing:

- [Oxygen \(1967-2001\)](#)

Pharmacologic Action:

- [Oxidants](#)

All MeSH CategoriesChemicals and Drugs CategoryInorganic ChemicalsFree Radicals**Singlet Oxygen**Display Show [Write to the Help Desk](#)[NCBI](#) | [NLM](#) | [NIH](#)[Department of Health & Human Services](#)[Privacy Statement](#) | [Freedom of Information Act](#) | [Disclaimer](#)

singlet molecular oxygen

The oxygen molecule (dioxygen), O₂, in an excited singlet state. The ground state of O₂ is a triplet $^3\Sigma_g^-$. The two metastable singlet states derived from the ground state configuration are $^1\Delta_g$ and $^1\Sigma_g^+$.

The term singlet oxygen alone, without mention of the chemical species is discouraged since it can also refer to an oxygen atom in a 1S or 1D excited state. While the oxygen atom ground state is a triplet 3P state, the 1S and 1D states are also derived from the ground state configuration.

1996, 68, 2273